1985 INDEX OF ARTICLES

Analog

ADC performs at 10 μs, cuts back analog filter costs ... NP, April 18, p. 288
A-d converter makes speed/accuracy tradeoffs under software control ... NP, Jan. 10, p. 375
Analog arrays rival digital designs in facility, performance ... TR, June 13, p. 86
Analog circuits ... TR, Feb. 21, p. 141
Analog front-end chip joins with μP to build versatile ADCs ... DE, March 7, p. 203
At a sizzling 2 MHz, 11-bit CMOS a-d chip has the field to itself ... NP, Nov. 28, p. 143
Autozero chip cuts op amp offset voltages to a mere ±5 μV ... DF, March 21, p. 143
Autozero chip drives op amp's offset to under 5 μV ... NP, March 7, p. 233
Bang-bang controller goes gunning for simple, accurate control loops ... DE, July 25, p. 129
Bipolar array IC builds high-voltage analog circuits nearing gigahertz speeds ... DE, Sept. 5, p. 169
Carrying two capacitors, chopper-stabilized op amp performs with precision ... DE, Nov. 14, p. 184
Chopper-stabilized monolithic op amp accepts ±6-V supply ... NP, Sept. 5, p. 187
CMOS a-d converter chip spits out 12 bits in record-setting 5 μs ... DE, Dec. 12, p. 93
CMOS d-a converter with 12-bit memory recalls commands ... DE, Oct. 3, p. 125
CMOS video d-a converter zips along at 75 MHz but keeps 8-bit accuracy ... NP, June 13, p. 177
Digital gain control wins op amp a niche in microprocessor systems ... DE, Feb. 21. p. 205
Dual comparator chip has differential inputs and runs off nanoamperes ... NP, May 30, p. 151
8-bit ADC, multiplexer squeezed into 24-pin DIP merely 0.3 in. wide ... NP, Sept. 5, p. 185
8-bit 'DAC-of-all-trades' unites ¼-LSB accuracy with 2.5-μs settling time ... NP, July 25, p. 189
8-bit quad DAC gains more flexibility with expanded pin count ... NP, Sept. 19, p. 238
50-MHz monolithic chip jams three video DACs into single CMOS package ... NP, July 11, p. 177
First monolithic DAC for RGB video puts double sampling in sight ... NP, May 30, p. 152
Focus on hybrid a-d converters ... NP, Oct. 17, p. 191
Four- and eight-input data acquisition chips convert 8 bits in 2.5 μs ... NP, Nov. 28, p. 148
Identical analog arrays put creating custom chips in the hands of software ... NP, Nov. 14, p. 251
Iterative array, mirror-image layout simplify the design of semicustom analog ICs ... NP, Feb. 21, p. 267
JFET-input op amps deliver high performance at standard-part prices ... NP, March 21, p. 234
Low-cost hybrid op amp slews at 3000 V/μs, reaches beyond 100 MHz ... NP, Jan. 10, p. 376
Monolithic amplifier makes the leap into uhf telecomm territory ... DE, June 27, p. 141
Monolithic amplifier puts out 100 mA while slewing at 350 V/μs ... NP, March 7, p. 234
Monolithic amplifier settles in 10 μs to 0.025% final value ... NP, Oct. 17, p. 199
Monolithic transmitter converts low-level signals for industrial control ... NP, Dec. 12, p. 161
MOSFETs for test array leak just 1 nA at 250 V ... NP, Dec. 12, p. 162
Nanoampere comparator IC with stable offset manages inputs unaided ... DE, May 2, p. 107
One-chip amplifier supplies 20 dB of gain from dc to 450 MHz ... NP, Jan. 24, p. 252
One-chip, auto-zero op amps need no external capacitors ... NP, Sept. 5, p. 186
Pair of one-chip op amps streamlines the design of fast analog circuits ... DE, Feb. 21, p. 235

The 1985 index of articles is divided into 15 major subject categories:

- Analog
- Communications
- Components
- Computer-Aided Engineering
- Computer Boards
- Computer Peripherals
- Computer Systems
- Digital LSI
- Factory Automation
- Memory Chips
- Networking
- Packaging & Materials
- Power
- Software
- Test & Measurement

Types of articles are coded as:

- DE: Design Entry
- NA: News Analysis
- NF: Newsfront
- NP: New Products
- PR: Product Report
- TR: Technology Report

Precision op amp ends concessions in speed, noise, and dc performance ... DE, Oct. 3, p. 115
Primed by a processor, an analog comparator chip can run its own show ... DE, Jan. 10, p. 289
Processing materials open factory doors ... TR, April 18, p. 133
Quad, dual op amps challenge the precision of single amplifiers ... NP, Feb. 21, p. 270
Quad sampling amplifier—in hybrid form—holds jitter to 5 ns ... NP, Nov. 28, p. 144
Sample-and-hold amplifier occupies single chip, grabs signals in 500 ns ... NP, Oct. 17, p. 206
Special-purpose circuits ... TR, Feb. 21, p. 156
Speed and precision mark a microprocessor op amp that feeds 20 mA to a load ... NP, May 16, p. 253
SPI bus gears up for data acquisition systems with a-d converter chip ... DE, July 11, p. 163
Standard cells step in to ease the design of high-voltage chips ... DE, Sept. 5, p. 149
10-bit a-d board uses special architecture for 40-MHz operation ... NP, May 16, p. 254
Trailblazing architecture creates 8-bit video DAC that clips along at 75 MHz ... NF, June 27, p. 37
Triple-DAC chip displays enough get-up-and-go for 2000-line RGB screens ... DE, Aug. 22, p. 119
12-bit a-d chip pair plus sample-and-hold chip converts 110,000 samples/s ... DE, Sept. 5, p. 159
12-bit DAC chip races at video speeds, but foregoes deglitching circuitry ... DE, June 13, p. 111
12-bit DAC talks back to microprocessor through input data latches ... NP, Sept. 19, p. 236
20-MHz a-d converter scales Nyquist peak with 10-MHz bandwidth ... NP, May 16, p. 256
2-V op amp rides the rails to claim current loops in process-control systems ... DE, July 25, p. 151
Using a crosslike emitter, superbeta process builds low-noise op amp ... NF, Aug. 22, p. 37
With its high speed and low gain, a buffer-amplifier shelves design compromises ... DE, Nov. 28, p. 125

Communications

As the age of ISDN nears, thorny technical issues still await resolution ... NF, June 27, p. 63
Chip set regenerates 3-Mbit/s PCM data stream for TIC or dedicated lines ... NP, March 7, p. 247
CMOS interface IC, aiming at U reference point, targets ISDN telecomm ... DE, July 25, p. 139
Coded data transceiver shares a common bus, eases system upgrading ... DE, April 4, p. 189
Digital interfaces tie communications systems into T1 and CEPT trunks ... DE, Feb. 7, p. 131
Digital quadrature PSK builds one-chip modem to meet 212A standards ... NF, Feb. 21, p. 47
Fast data-comm controller speaks to all protocols over two sets of channels ... DE, Jan. 24, p. 157
Focus on portable data-comm testers ... PR, July 25, p. 163
Optical transmitter moves 2 Gbits/s but occupies only 7.5 cm^2 ... NF, April 18, p. 95
Purely optical switch positions itself for fiber-optic telecomm ... NF, Jan. 10, p. 91
Transceiver ICs adapt to use with all types of voice-data networks ... DE, July 11, p. 137
Twin controller ICs power subscriber interface for digital phone systems ... DE, July 11, p. 147

1985 INDEX OF ARTICLES

Components

Coming in at 20 Mbaud, an optocoupler IC doubles the data transfer rate ... DE, Oct. 3, p. 133
Diode arrays double line scanner's sensitivity ... NP, Dec. 12, p. 168
Electrically erasable IC substitutes for potentiometer ... NP, Nov. 14, p. 256
Electrolytic capacitors keep shrinking, survive longer ... TR, Jan. 24, p. 109
EL flat panel display mimics PC with 2:1 pixels ... NP, Oct. 31, p. 208
Focus on RF connectors ... NP, May 2, p. 193
Focus on stepper motors ... PR, Oct. 31, p. 183
Glass capacitors break into chips to crack the microwave barrier ... NF, July 25, p. 45
Liquid-crystal shutter adds low-cost color to monochrome CRTs ... DE, March 7, p. 177
Liquid-crystal subsystem produces 3 colors from monochrome CRTs ... NP, Feb. 7, p. 208
Parallel photodiode, aided by a serial scanner, flashes a 50-ns response ... NF, May 16, p. 93
Programmable keyboard puts 50 functions, letters on tap at any key ... NF, April 4, p. 77
Tactile force-torque sensors are on their way, complementing today's sophisticated robotic vision systems. Much of the credit goes to improved materials, backed by piezoresistive and other transduction techniques ... TR, June 27, p. 103
Tactile sensor hits high-resolution mark of robot's vision systems ... NF, Feb. 7, p. 45
Tactile sensor tucks a 256-point array into a robot's palm ... NF, May 16, p. 45

Computer-Aided Engineering

Analyzer module debugs 500-MHz logic with a scope's resolution ... DE, Aug. 22, p. 107
Better CAE tools help marry digital and analog circuitry ... TR, June 13, p. 96
CAD system for PCs draws in 3D, takes orders in English ... NF, Feb. 21, p. 52
CAE software rounds out design of gate arrays to include test programs ... DE, March 7, p. 127
CAE workstations find home on HP 9000 Series 300, IBM PC AT and compatibles ... NP, Oct. 31, p. 200
Circuit simulator and multiple processor spice up IC design ... DE, Dec. 12, p. 119
Design package for PCs covers schematic capture through board layout ... DE, March 21, p. 197
Focus on graphics workstations ... PR, Aug. 22, p. 157
For circuit and timing simulators, greater speed and accuracy meet the challenge of denser chips ... TR, Oct. 17, p. 97
Hardware accelerator picks up the pace across full design cycle ... DE, Oct. 17, p. 177
Hardware and software in development tools make processing chips purr ... DE, Nov. 28, p. 135
High-level debugger links to personal computers, probes iAPX-186 software ... NP, June 13, p. 186
High-speed router for circuit board layouts works unattended ... NP, April 18, p. 243
Intelligent graphics station draws 30,000 vectors/s, displays up to 4096 colors ... NP, Aug. 15, p. 145
Performance tester eases programming of complex bus-structured boards ... DE, Feb. 21, p. 249
Powerful PC-based tools close the loop between designing and testing ICs ... DE, June 13, p. 159
Real-time analyzer furnishes high-level look at software operation ... DE, Sept. 19, p. 117
Real-time emulation arrives for 14-, 16-MHz systems ... NP, Nov. 14, p. 260
Scientific computer simulates VLSI circuits in record time ... DE, March 7, p. 153
Simulation accelerator checks out 65,000 gates; checks in at $80,000 ... NP, June 27, p. 173
Simulator merges speed of logic verifiers with circuit-level accuracy ... DE, Nov. 28, p. 97
68020-based workstations better minicomputers by running twice as fast ... NP, Sept. 19, p. 255
Software draws circuits for programmable logic in typical schematic form ... DE, March 7, p. 141
Software for IBM PC speeds chip and pc board design, offers timing verification ... NP, March 21, p. 225
Statistics software keeps surprises out of analog design ... DE, May 2, p. 135
Through thick and thin, CAD tools keep pace with hybrid components ... DE, March 7, p. 115
Using programmable logic, desktop 'foundry' lowers risk of semicustom design ... DE, Oct. 17, p. 143
Workstation moves in on mainframes, tackling hefty gate arrays ... DE, March 7, p. 99
Workstation routes even the densest boards without tying up traffic ... DE, May 16, p. 189
Software debugger checks Pascal, C programs in real time ... NP, March 21, p. 228

Computer Boards

Board arrives for digital signal processing on the VMEbus ... NP, Jan. 24, p. 266
Daughterboard plugs in 68020 and coprocessor, boosts systems to 32 bits ... NP, Nov. 14, p. 254
Fastest Nova card turns in unrivaled 20 MIPS performance ... NP, Nov. 28, p. 154
Focus on single-board computers ... PR, March 21, p. 213
Multiboard controller sets pace of IPI level 3 at 6 Mbytes a second ... NF, Aug. 22, p. 70
68020 CPU, dense memory, and controller cards push VMEbus into 32-bit turf ... NP, June 27, p. 176
Symbolic processor brings Lisp and Prolog to OEM systems ... NP, Aug. 8, p. 143
$250 speech board recognizes 250 speaker-dependent words ... NP, Feb. 7, p. 194

Computer Peripherals

Fitted with SCSIs, 5¼-in. hard disk drives hit capacity highs ... NP, May 2, p. 201
Focus on high-capacity Winchester disk drives ... PR, Sept. 19, p. 209
Focus on VMEbus peripheral boards ... PR, June 27, p. 157
Magneto-optics combines erasability and high-density storage ... TR, July 11, p. 93
Optical encoding technique keeps a daisy wheel spinning ... NF, July 11, p. 75
Printing-on-the-fly doubles daisy wheel's print speed ... NF, Jan. 24, p. 46
Winchester disk drive stores 20 Mbytes in standard 3½-in. package ... NP, April 4, p. 256

Computer Systems

Data-flow processing poised to leave laboratory behind ... NF, May 30, p. 38
Dual buses, cache, and floating-point math lift 32-bit chip set to 5 MIPS ... NF, Oct. 3, p. 41
For fault-tolerant computing, software is finding a powerful ally in hardware ... TR, Oct. 31, p. 110
For hefty computing power, European designers flex multiprocessor muscle ... NA, July 25, p. 57
Minicomputer turns to ECL gate arrays, reaches 8 MIPS ... NF, Nov. 28, p. 37
Multimaster bus stretches VMEbus reach from 50 cm to 100 m ... NF, Dec. 12, p. 65
Parallel processing pushes 32-bit PC to a fiery 50 MIPS ... NF, March 21, p. 50
Parallel processor array rapidly generates raster graphics images ... NF, Jan. 24, p. 93
Road is being paved to take STD bus to 16 bits ... NF, Oct. 31, p. 43
Software opens the way to true concurrency for multiprocessing ... TR, Aug. 8, p. 83
Speech input system heeds data and commands with 1000-word recognition ... DE, June 27, p. 147
STD bus, well-decked with cards, makes its multiprocessing debut ... NF, April 18, p. 47
Superlong instructions help supermini refine number crunching ... NF, Nov. 14, p. 41
Supermini's architecture schedules programs on its own ... NF, July 25, p. 46
Varied blueprints will lift system speeds to dizzying heights ... TR, May 30, p. 83

Digital LSI

Algorithms and chips cooperate to squeeze more speech signals into less bandwidth ... TR, Oct. 3, p. 90
Application-specific ICs, relying on RAM, implement almost any logic functions ... DE, Oct. 31, p. 123
Bit-stream management ICs pair up as the core of speedy data controllers ... DE, May 2, p. 147
Boosting on-chip RAM lets logic array shoulder a world of new tasks ... DE, Feb. 21, p. 221
Channelless structure pushes back density limits of CMOS standard cells ... DE, June 13, p. 147
Chip microcontrollers permute and combine an assortment of functions ... DE, Feb. 7, p. 87
Chip's hardware, software speeds up processing in laboratory instrumentation ... DE, April 4, p. 215
Chip set synthesizes an unlimited vocabulary from ASCII text ... NP, Jan. 24, p. 258
CMOS counter-timer IC watches the clock for machine and user ... DE, April 18, p. 217
CMOS logic with bipolar-enhanced I/O rivals Fast TTL gates ... DE, Feb. 7, p. 117
CMOS μP runs 68000 code, carries its own MMU ... NF, Oct. 31, p. 46
CMOS microprocessor series shapes its personality with software and hardware ... DE, March 21, p. 157
Controller chip puts text and graphics on the same bit map ... DE, June 27, p. 119
Controller with SCSI port and on-chip μC manages hard disks single-handedly ... DE, Oct. 3, p. 105
Digital circuits ... TR, Feb. 21, p. 120
Digital filter chips and PLAs recognize 1000 words in real time ... NF, April 18, p. 48

Digital GaAs ICs ... TR, Dec. 12, p. 78
Digital signal processor boosts speed of graphics display systems ... DE, March 21, p. 205
Digital signal processor borrows from μP to step up performance ... DE, Feb. 21, p. 175
Dissipating 20 μW/gate, a bipolar logic circuit wins a round with CMOS ... NF, June 13, p. 63
Distinctions blur between gate arrays and cells as digital technology evolves ... TR, June 13, p. 78
Diverse applications put spotlight on 68020's improvements ... DE, Feb. 7, p. 155
DSP chip adds multitasking telecomm capability to engineering workstation ... DE, May 2, p. 173
Dynamic RAM controller pushes system speed to 10 MHz and beyond ... DE, April 4, p. 205
EPROM-based logic chip opens its gates to all flip-flop types, clocks ... DE, July 11, p. 109
Error checking and correcting IC slashes optical disk defects ... NF, Dec. 12, p. 37
Fastest-yet CMOS family makes its bid for more Schottky territory ... DE, Feb. 7, p. 103
Fast processor chip takes its instructions directly from Forth ... DE, March 21, p. 127
Floating-point chip set beefs up desktop systems with processing muscle ... DE, May 30, p. 107
Focusing on data paths, a controller IC anticipates disk interface standards ... DE, June 27, p. 131
Focus on graphics chips ... PR, March 7, p. 217
Focus on high-speed static RAMs ... PR, Sept. 19, p. 223
Front-guard logic family pulls 0.1 mW/gate, eclipses standard chips ... NP, Nov. 14, p. 224
Fuse-programmable chip takes command of distributed systems ... DE, Oct. 17, p. 129
Graphics controller chip does windows, plus a whole lot more ... DE, Nov. 28, p. 111
Hard and floppy disks plus tape obey disk control chip duo ... DE, Jan. 24, p. 185
Harvard architecture pushes microcontroller IC into high-speed realm ... DE, May 30, p. 127
Highly integrated color palette chips burst on the scene ... NA, Aug. 8, p. 51
Interface arrangement suits digital processor to multiprocessing ... DE, March 7, p. 189
Interface chips set up fast-moving dialogue between drive, controller ... DE, Aug. 8, p. 111
Laser recrystallization stratifies three levels of silicon on a single chip ... NF, May 30, p. 68
Low-power gate array with bipolar logic halves propagation displays ... NP, April 18, p. 236
Makers of semicustom ICs greet bit-slice devices and μPs with open arms ... NA, Jan. 10, p. 65
Memory management and I/O prove 8-bit processors cannot be counted out ... DE, Jan. 10, p. 303
Microcontrollers carry 8 kbytes of ROM, run as quickly as 8 MHz ... NP, Nov. 14, p. 215
Microprogram sequencer handles a system's interrupts in real time ... DE, Jan. 10, p. 319
New algorithms, chips bestow human qualities on synthesized speech ... TR, May 16, p. 113
One-chip μCs adopt off-the-shelf OS for real-time tasks ... NF, Jan. 10, p. 39
One-chip 'slide rule' works with logs, antilogs for real-time processing ... DE, May 2, p. 121
125-MHz CMOS IC supplants numerous ECL parts, drives million-pixel color CRTs ... DE, Sept. 5, p. 131
Preprogrammed μC directs speech chip for simple, compact voice I/O ... NP, Jan. 10, p. 403
Printer buffer proves RAM-based logic's strength and versatility ... DE, Nov. 14, p. 139
Programmable controller IC for Winchester, floppies tops out at 20 Mbits/s ... NP, April 18, p. 235
Programmable logic chip holds 16 configurable cells in a high-speed design ... NP, July 25, p. 185
Pulse detector chip keeps hard-disk drives virtually error-free ... DE, Aug. 8, p. 121
Signal-processing chip whips through 1 million second-order sections/s ... DE, Oct. 31, p. 141
68020 dynamically adjusts its data transfers to match peripheral ports ... DE, Jan. 24, p. 219
Speedy CMOS logic drives transmission lines with Schottky efficiency ... DE, May 16, p. 211
Support chips for Winchesters lower parts count and eliminate adjustments ... NP, March 21, p. 253
Support chip teams with data-flow processor to cut component count ... NP, Sept. 19, p. 246
Systolic arrays fill the bill as data-base management heads for gigabyte range ... DE, Jan. 10, p. 349
10-MIPS chips ease parallel processing with serial links ... NP, Oct. 31, p. 206
32-bit microprocessor can run Unix and MS-DOS programs concurrently ... DE, Oct. 17, p. 115
32-bit μP is a fine match for today's languages and operating systems ... DE, Oct. 31, p. 161
32-bit 68020's power flows full through a versatile interface ... DE, Jan. 10, p. 335
Three-chip control set trims VMEbus logic for asynchronous systems ... DE, Jan. 24, p. 207
3-GHz GaAs logic array fits discrete ECL designs into a 300-gate package ... NP, May 30, p. 157
2-μm standard-cell family builds VLSI semicustom circuits ... DE, June 13, p. 123
Using a simple structure, single-phase GaAs CCD streamlines processing ... NF, Oct. 17, p. 81
Wafer-level integration borrows from hybrid techniques ... NF, May 16, p. 52
Triple-mode ALU lets DSP chip zip through multiplications ... NF, Oct. 31, p. 79

Factory Automation

Current transmitter IC caters to high-level signals and tight budgets ... DE, April 18, p. 165
Family of I/O boards settles differences arising from CMOS STD bus ... NP, June 13, p. 178
I/O boards bring thousands of data points under PC control ... DE, Sept. 5, p. 177
Machine vision ... TR, Nov. 14, p. 106
One-element transducer brings uniform traits to IC pressure sensors ... DE, April 18, p. 193
Programming language brings one tongue to the factory floor ... DE, Sept. 19, p. 161
Recognition scheme lets inspection systems see in 32 colors quickly ... NF, Sept. 5, p. 85
Robotic arm, accurate to within 0.5 μm, sets a precedent for precision ... NF, May 2, p. 37
Servo controller on an IC slashes the parts count for industrial robotics ... DE, March 21, p. 187
3D system compares images of object surfaces for on-line inspections ... NF, June 27, p. 84
Versatile transmitter chip links strain gauges and RTDs to current loop ... DE, April 18, p. 153

Memory Chips

CMOS 64k RAM mates static speed with dynamic density ... DE, July 25, p. 117
CMOS 256-kbit video RAM, with wide two-way bus, picks up speed, drops power ... DE, Sept. 19, p. 171
Configurable RAM cell boosts gate-array flexibility ... NF, Jan. 10, p. 39
Different personalities lend shadow RAM a range of operating modes ... DE, Sept. 19, p. 163
Dynamic CMOS RAM matches static speeds, has three access modes ... NP, Aug. 8, p. 147
Dynamic video RAM snaps the bond between memory and screen refresh ... DE, May 30, p. 117
'Keep it simple' is 1-Mbit ROM's motto for μP interfaces ... DE, June 13, p. 171
Processing technique brings EEPROM to standard cells ... NF, Oct. 17, p. 41
Two-transistors form EPROM cell that builds high-speed logic arrays ... NF, Jan. 24, p. 45

Networking

High throughput, low cost distinguish Apple PC network ... NF, Feb. 7, p. 38
Local network keeps throughput in top form, yet stays fault tolerant ... NF, Feb. 21, p. 99
Network moves 4800 baud across ac power lines, without special wiring ... NF, March 21, p. 81
Resourceful debugger sifts through faults in IEEE-802.3 LANs ... DE, Jan. 24, p. 173

Packaging & Materials

Ceramic carrier puts in a sealed bid for plastic domain ... NF, Sept. 19, p. 44
Conductive polymer inks may spell the future of multilayered boards ... NA, Feb. 7, p. 53
TO-220 resists stress to dramatically reduce mounting failures ... NF, Sept. 19, p. 76
Vertical rack assembly eases interconnection of leadless chip carriers ... NF, May 2, p. 72

Power

Ac-line monitor prints waveform graphs of voltage disturbances ... DE, Jan. 24, p. 199
Brushless dc motors get a controller IC that replaces complex circuits ... DE, Sept. 19, p. 149
Building-block converters distribute power throughout large systems ... NP, Jan. 24, p. 262
Carrying 10 A at 400 V, bipolar power chip withstands up to 800 V ... NF, July 25, p. 80
CMOS curbs the appetite of power-hungry dc-dc converter chips ... DE, Nov. 14, p. 175

1985 INDEX OF ARTICLES

Commutation chip keeps dc brushless motors out of harm's way ... DE, April 18, p. 183
Compact power unit raises supply's switching rate by an order of magnitude ... DE, April 4, p. 161
Current-mode control lets a power supply be paralleled for expansion, redundancy ... DE, Nov. 14, p. 125
Current-mode regulation simplifies paralleling of five-output switcher ... NP, Nov. 28, p. 150
Fabrication process speeds ac switching by order of magnitude ... NF, March 7, p. 80
Focus on power supply ICs ... PR, Aug. 8, p. 137
Focus on power transistors ... PR, Nov. 14, p. 191
Focus on switching power supplies ... PR, Oct. 3, p. 147
IC replaces transformer, slashing power supply size and weight ... NP, Feb. 7, p. 202
Mixed MOS devices unite in a switch chip that links power with smarts ... DE, Feb. 21, p. 191
Power supply chips apply their many talents to running 5-V systems ... DE, May 16, p. 201
Production-line test spots power DMOS devices most prone to failure ... NF, Sept. 5, p. 37
PWM controller chip hits frequency highs of switching supplies ... DE, May 30, p. 97
Single chip builds complete closed-loop position servo for small dc motors ... NP, April 4, p. 262
30-V power MOSFETs consume 30% less silicon to realize savings ... NP, Nov. 14, p. 228
With better isolation, power ICs unite small-signal and large-signal devices ... TR, Sept. 5, p. 111

Software

Ada environment, tuned to VAX, makes writing control programs quick work ... DE, Nov. 14, p. 163
AI's growing bag of tools offers smart solutions to designers, engineers ... NA, Nov. 14, p. 67
Bridge compiler eliminates device modeling problem for logic simulator ... NF, March 7, p. 39
C interpreter refines programmer's ability to write error-free code ... DE, March 7, p. 167
Compaction algorithm saves space while aligning ports between cells ... NF, Nov. 14, p. 92
Compiler software generates silicon from logic states ... NF, Feb. 21, p. 50
Development system relieves programmer of language specifics ... NF, Feb. 7, p. 37
Each AI language has its strengths, but none excels in all applications ... TR, Mar. 21, p. 96
Embedded I/O stimulus eases software debugging ... NP, Dec. 12, p. 165
Focus on project-management software ... PR, Dec. 12, p. 149
Fortran engineering arrives for the IBM PC in full battle dress ... NP, Jan. 10, p. 399
Fully distributed OS directs various aPs to ensure portability ... NF, April 4, p. 45
Hardware language devised for VHSIC is poised for takeoff ... NA, Jan. 24, p. 67
In breaking the rules of conventional programming, artificial-intelligence languages create some of their own ... TR, March 21, p. 95
Instruction generation technique speeds program execution ... NF, March 7, p. 40
Integrated graphics enter the picture to aid expert systems ... NF, May 16, p. 50
Knowledge-based software turns specifications into efficient programs ... DE, July 25, p. 105
Knowledge engineering: Tapping the experts ... TR, May 2, p. 93
Languages for expert systems seek to combine simplicity and efficiency ... TR, March 21, p. 108
MS-DOS moves up the processing ladder to full 32-bit power ... NF, June 27, p. 38
Pascal compiler performs separate compilations, adds system extensions ... NP, March 21, p. 226
PC-based tools paint clear pictures of structured programs ... NP, Aug. 8, p. 156
Programming language makes silicon compilation a tailored affair ... DE, Dec. 12, p. 135
Programming language to transform flowcharts into source code ... NF, Aug. 8, p. 69
Security system locks up software from all but rightful keyholders ... DE, Oct. 31, p. 177
Simulation algorithm bests the standard by factor of 30 ... NF, July 11, p. 44
Simulator's graphic output helps circuit designers evaluate cell testability ... NF, Oct. 3, p. 73
16-bit operating system opens PC ATs to real-time development ... NP, May 30, p. 169
'Software block diagram' simplifies system programming ... NF, Nov. 28, p. 75
Software debugger treats high-level code without target system ... DE, July 11, p. 125
Software and 'fuzzy' logic let any good programmer design an expert system ... DE, April 4, p. 173
Software generates speech spectrograms in real time on PCs ... NP, July 25, p. 177
Software innovations help design and test intricate VLSI circuits ... NA, May 16, p. 59
Sticking to the facts builds PC-based expert systems ... NF, June 13, p. 40
System maps logic hardware directly into software ... NP, Aug. 22, p. 172
System simulator blazes through 1.5 million gates at 1 billion events/s ... NF, May 30, p. 37
Technique for untangling instruction flow frees computer to pick up speed ... DE, Aug. 22, p. 131
Through automation, software shapes itself to the task at hand ... TR, July 25, p. 87
Tool kit with PHIGS sets top-drawer standards for 3D graphics ... NF, July 11, p. 43
Unix modification embeds checking, control within kernel ... NF, Aug. 22, p. 38
Zipping through FFTs, software tools turn PCs into signal processors ... DE, March 21, p. 175

Test & Measurement

Analyzer plus scope displays timing, analog waveforms at same time ... DE, Jan. 24, p. 124
Benchtop board testers take custom programming, mixed circuitry in stride ... TR, Nov. 28, p. 84
Data acquisition system plots relationships among vital variables ... DE, Oct. 31, p. 135
Data acquisition system takes low-level readings without sacrificing speed ... NP, Aug. 22, p. 171
Digital test system attacks the evaluation of VLSI prototypes ... DE, Aug. 8, p. 95
Disk drive analyzer speeds testing with innovative graphics ... DE, May 16, p. 167
DMMs bring laboratory precision to the production floor ... TR, May 16, p. 134
Dual-bus architecture overcomes drawbacks of GPIB instrument setups ... NF, Sept. 19, p. 41
Focus on Universal device programmers ... NP, May 30, p. 141
Functional tester boasts 50-Mbit memory, versatile test modes ... NP, April 4, p. 244
GPIB replacement coordinates hardware, simplifies software ... DE, Dec. 12, p. 107
Hybrid instruments forge an alliance between analog and digital worlds ... DE, Jan. 24, p. 123
Ingenuity adds polish to brute force ... TR, Aug. 22, p. 87
LSI tester checks analog and digital parts of chips at same time ... NP, Feb. 7, p. 188
Modular ATE systems grab test vectors from existing data bases ... NP, Nov. 14, p. 225
Pair of custom chips delivers steady waveforms to ends of test probe ... NF, March 21, p. 45
Pattern generator moves big-system resources onto designer's desktop ... DE, Sept. 19, p. 135
Pattern generator produces 35 million patterns/s, each up to 512 bits wide ... NP, Feb. 7, p. 187
Personal instruments cover wide range of applications at low cost ... NP, April 4, p. 243
Precision current source packs 100-A wallop in a compact package ... NP, Oct. 31, p. 198
Probabilistic scheme speeds fault grading for logic circuits ... NF, Aug. 8, p. 37
Probabilistic software quickly grades test vectors for total fault coverage ... DE, Oct. 17, p. 161
Programmable translator turns multiple logic levels into a tester's TTL ... DE, May 16, p. 177
7½-digit meter resolves down to 10 nV with 3-ppm error in 24 hours ... NP, March 7, p. 246
6½-digit system DMM is programmed with user-defined commands ... NP, Feb. 21, p. 284
Smart ac voltmeter finds and analyzes signals and harmonics ... NP, Jan. 24, p. 227
Smart ac voltmeter takes giant step forward in analysis and comparisc n ... DE, Aug. 8, p. 105
Speed and flexibility are equal partners in digitizing scope ... DE, Jan. 24, p. 138
Target chamber, pods place ion implanter right on the beam ... NF, Sept. 19, p. 46
Test software bolsters confidence level for programmable logic ... DE, May 2, p. 161
2-MHz phase synthesizer brings NBS accuracy to engineer's test bench ... DE, April 18, p. 203
Using adaptive methods, digital scopes work in 1-MHz bandwidth ... NP, Oct. 31, p. 197
Video signal generator's 200-MHz bandwidth doubles existing speed spec ... NP, Feb. 7, p. 190
Waveform synthesizer relies on equations to define complex signals ... DE, May 16, p. 155